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Proposed Maximum Residue Limit PMRL2013-65

Tembotrione

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) is proposing to establish maximum residue limits (MRLs) for tembotrione on various commodities to permit the import and sale of foods containing such residues.

Tembotrione is a fungicide currently registered in Canada for use on field corn.

The PMRA must determine the quantity of residues that are likely to remain in or on the imported food commodities when tembotrione is used according to label directions in the exporting country, and that such residues will not be a concern to human health. This quantity is then legally established as an MRL on the corresponding imported commodity. An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

Consultation on the proposed MRLs for tembotrione is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix 1.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Standards Council of Canada.

The proposed MRLs for tembotrione are as follows.

Table 1 Proposed Maximum Residue Limits for Tembotrione

Common Name	Residue Definition	MRL (ppm)	Food Commodity
Tembotrione	2-[2-chloro-4-(methylsulfonyl)-3-[(2,2,2-trifluoroethoxy)methyl]benzoyl]-1,3-cyclohexanedione and the metabolite M5 (2-[2-chloro-4-(methylsulfonyl)-3-[2,2,2-trifluoroethoxy)methyl]benzoyl]-4,6-dihydroxycyclohexane-1,3-dione)	0.04	Sweet corn kernels plus cob with husks removed
		0.02	Field corn, popcorn grain

ppm = parts per million

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs regulated under the *Pest Control Products Act* (PCPA), both for pesticide(s) or for food commodity(ies).

International Situation and Trade Implications

Table 2 compares the MRLs proposed for tembotrione in Canada with corresponding American tolerances. American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. Currently, there are no Codex MRLs[1] listed for tembotrione in or on any commodity on the Codex Alimentarius Pesticide Residues in Food webpage.

Table 2 Comparison of Canadian MRLs and American Tolerances (where different)

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)
Corn, sweet, kernels plus cob with husks removed	0.04	0.01*

* The established American tolerance is determined by measuring tembotrione only, whereas the residue definition in Canada is tembotrione plus the metabolite M5.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for tembotrione up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRL will be legally in effect as of the date that they are entered into the Maximum Residue Limit Database.

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Appendix I

Summary of Field Trial Data Used to Support the Proposed MRLs

Residue data for tembotrione in field corn, sweet corn and popcorn were submitted to support the use on field corn and the maximum residue limits (MRLs) on imported sweet corn and popcorn. In addition, a processing study in treated field corn was reviewed to determine the potential for concentration of residues of tembotrione into processed commodities.

Maximum Residue Limits

The recommendation for MRLs for tembotrione was based upon the residues observed in crop commodities treated according to exaggerated rates from submitted field trials. Table A.1 summarizes the residue data used to calculate the proposed MRLs for field corn, sweet corn and popcorn.

Table A.1. Summary of Field Trial and Processing Data Used to Support Maximum Residue Limits (MRLs)

Commodity	Application Method/ Total Application Rate (g a.i./ha)	PHI (days)	Residues (ppm)		Experimental Processing Factor
			Min	Max	
Popcorn	Postemergence/ 184-193	72-93	<0.02	<0.02	Not required
Field corn	Postemergence/ 180-195	76-112	<0.02	<0.025	No concentration observed in oil, flour, grits, meal, starch
Sweet corn (K+CWHR)	Postemergence/ 182-190	44-46	<0.02	<0.035	Not required

PHI = preharvest interval

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of tembotrione and the metabolite M5. Residues of tembotrione in these crop commodities at the proposed MRLs will not pose health risks of concern to any segment of the population, including infants, children, adults and seniors.